French Immersion Series

LEARNING DISABILITIES AND PREDICTION OF SUCCESS IN PRIMARY FRENCH IMMERSION:

An Overview

RONALD L. TROTTER, Principal Investigator

This research project was funded under the Ministry of Education, Ontario.
It reflects the views of the authors and not necessarily those of the Ministry.

The Althouse Press, London, Ontario

Ministry
of
Education

86-04978/

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The Honourable Sean Conway, Minister

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Canadian Cataloguing in Publication Data

Trites, R. L. (Ronald Lou), 1936-
Learning disabilities and prediction of success
in primary French

(French immersion series)
Bibliography: p.
ISBN 0-7729-1214-9

1. Language acquisition. 2. Learning disabilities.
3. French language--Study and teaching as a
second language (Elementary)* I. Ontario. Ministry
of Education. II. Title. III. Series.

LB1139.L3.T75 1986 372.6'5'41 C86-099648-4

Considerable attention has been paid to the success of French immersion programs in Canadian schools. However, as may be expected, some children experience learning difficulty in the programs and drop out for this reason. It is important to discover the characteristics of children who experience difficulty in the immersion programs and then if possible use this information to develop screening assessments so that children at risk because of learning difficulties can be identified prior to program entry. These two topics have been the object of seven years of research. The following pages contain a brief, non-technical summary of the findings. A bibliography of the research reports from this series of investigations is attached. Interested readers are encouraged to consult the original documents for a detailed review of relevant research, description of research design, tools used, and research findings.

The first two years of the study were concerned with determining the characteristics of children who experience learning difficulties in primary French immersion. The following five years of investigation focused on the development of a series of tests which could be administered to four-year-old children, prior to their entry into a primary French immersion program, which would be predictive of their long-term success in the program.

The first part of the study began with a detailed comparison of a group of 32 French immersion learning-disability children with other groups of children who experience learning difficulties in school (Trites & Price, 1976). The latter groups, each comprised of 32 children, included the more familiar kind of problems such as primary reading disability, children with emotional problems, hyperactive children, and children with evidence of brain dysfunction. Other groups of children with learning difficulties in which language of instruction was implicated were included. These were immigrant children whose native language was something other than English and who were being educated in an English program; Anglophone children who were attending Francophone schools and who were having difficulty; and Francophone learning-difficulty children attending a French language school. All children were extensively tested. The French immersion learning-difficulty group stood out from the other seven learning-difficulty groups for a number of reasons. They tended to be brighter, were from more advantaged socioeconomic backgrounds, had higher scores on tests of perceptual and language ability, and generally performed at significantly higher levels on tests of physical coordination, strength, and sensory-motor function. However, they performed the poorest of all the groups on a complex psychomotor problem-solving task, the Tactual

Performance Test. This measure in neuropsychology can, in strictly defined situations, be a measure of adequacy of temporal lobe functioning. The temporal lobes are brain structures important in memory and language function.

Follow-up studies of the drop-outs from primary French immersion indicated that their performance after age nine or ten reached normal limits on the Tactual Performance Test. Hence, the poor Tactual Performance Test results of the early drop-outs from primary French immersion was considered suggestive of a mild maturational lag in the temporal lobe regions of the brain. In view of the fact that the eight groups in the first study were clinic referral cases, it was considered important to replicate the findings on a non-clinic referral group. In the second year of study, 16 drop-outs who had left the primary French immersion program for academic reasons were matched with 16 success children for age, sex and having had the same French immersion Kindergarten teacher (Trites & Price, 1977). All children were extensively tested and once again the drop-outs were reliably differentiated from the success children. The drop-out group performed significantly more poorly on the Tactual Performance Test than the success group below age nine but there were no significant differences in the older children on this measure. Thus the first two years of investigation demonstrated that there were reliable differences between success and drop-out children on a variety of neuropsychological tests, academic achievement, and other measures.

The results indicated as well that the type of learning disability in French immersion was different from the pattern of deficits seen in more traditional types of learning difficulties such as reading disability or "minimal brain dysfunction". These results raised the possibility that an early identification assessment could be developed which, when given to four-year-old children, would accurately predict their future performance in a primary French immersion program prior to their entry into such a program.

An early identification study was begun in the Ottawa schools in the 1976-77 academic year and several of the children in that study were followed through Grade five (Trites & Price, 1978, 1979; Trites & Moretti, 1986). At the outset, extensive family and background factors along with classroom information was obtained on over 1300 children attending English four-year-old Kindergarten in the Ottawa Board of Education. The parents of approximately 450 of the children indicated they intended to enroll their child in primary French immersion beginning in five-year-old Kindergarten. A random sample of 200 of these children was

selected for long-term study. There were several differences between the children scheduled to enter primary French immersion and those scheduled to attend English five-year-old Kindergarten. The children who were to enter French immersion Kindergarten were from higher socioeconomic levels, tended to have parents who either knew or were planning to learn French, had more books in their home, were read to frequently by their parents, and were described by their teachers as more able, mature and motivated to learn. Psychological assessments of these children at the end of four-year-old Kindergarten indicated they were an able group with intelligence in the bright-normal range, excellent vocabulary skills in English, and advanced academic readiness in areas such as reading, spelling, and arithmetic.

The children were tested at the end of five-year-old French immersion Kindergarten (1978), end of Grade one (1979), Grade four (1982), and Grade five (1983). Although there was attrition from the study, it was possible to reassess over 60% of the children throughout the full seven years of the prospective early identification program. The children who dropped out of the program because of learning difficulties were followed as well as the children who remained in the program and progressed well. Some children began dropping out of the program in five-year-old Kindergarten and Grade one. They were examined very carefully before determining whether the reasons for dropping out were primarily academic or were based on other factors which included parent dissatisfaction with bussing or dissatisfaction with resources in the French immersion program. Even though the French immersion group were of bright-normal intelligence, accelerated in their early development and highly motivated to learn, 34 dropped out for well-documented academic problems. Eighty of the original 200 remained in the French immersion program through the duration of the study.

Using conservative calculations, 20% of the sample dropped out of the immersion program because of learning difficulties and a further 20% remained in the program in spite of persistent low achievement levels. Careful examination of the school records plus the test data gathered in this project indicate that three-fourths of all drop-outs were doing poorly on academic achievement tests in five-year-old Kindergarten and Grade one.

Teacher predictions obtained at the end of four-year-old Kindergarten and five-year-old Kindergarten about whether or not a child was a good candidate for primary French immersion were poor indicators of eventual outcome in the French immersion program. Although teacher predictions of success tended to be fairly frequent for children who did well in the program,

many children who eventually dropped out of French immersion for academic problems were rated by their four-year-old and five-year-old Kindergarten teachers as good candidates for the program. Thus, the high rate of false positive predictions tended to greatly lower the overall accuracy of teacher predictions. Drop-outs tended to occur somewhat more frequently among boys, among children of comparatively lower socioeconomic level (but still, in this sample, from among advantaged social backgrounds), tended to have less nursery school experience, have fewer books in the home, and come from comparatively lower IQ groups (but usually were of average or higher intelligence).

The four-year-old early identification battery was highly accurate in predicting success in the French immersion program. In terms of progress in the program through Grade five, the four-year-old test battery correctly classified 85% of the children as to whether they would remain in French immersion or drop out for academic reasons. To further differentiate the groups it was possible to distinguish the drop-outs with 80% accuracy from those children who would remain in the program but do poorly and those who would remain in French immersion and be high achievers. The five-year-old Kindergarten test battery had an even higher predictive accuracy. In keeping with the maturational lag model, the Tactual Performance Test was a significant predictor of success or failure in five-year-old immersion Kindergarten and Grade one but in the Grade four and five assessments this measure was no longer among the highly significant predictors. The predictor variables for the older age group included measures of verbal and nonverbal problem-solving ability, verbal fluency, visual perceptual discrimination, and concept formation ability.

It is important to recognize that children who drop out of French immersion because of learning difficulties do well when they are enrolled in an English language program. Less than half of the children who made the switch to an English language program repeated a grade. Those who did repeat a grade, repeated one grade only and this seemingly was because by being enrolled in the immersion program for Kindergarten and perhaps longer they had missed out on work in the English language curriculum and thus required a catch-up period. Long-term follow-up of the French immersion drop-outs indicate that they did well in the English program and continued to accelerate in the development of English language achievement skills for a number of years following their enrolment in the English program. They in fact made significantly greater gains in the development of English academic achievement skills when compared with the development of English language achievement skills of children enrolled in

the French immersion program. This clearly indicated that their learning difficulties were specific to the second language program and were not indicative of a primary language or learning disability.

Personality testing combined with parent and teacher ratings of the children's behaviour failed to reveal any detrimental effects caused by dropping out of primary French immersion programs as a result of learning difficulties. However, long-term follow-up revealed a mildly negative self-concept amongst the drop-out group in spite of having done well for several years in the English language program. This fact, combined with a specific dislike for French and frequent negative opinions of French immersion programs, seems to explain why none of the drop-outs in the groups studied opted for a late immersion program. This is unfortunate since if the maturational lag hypothesis is correct these children would progress normally if enrolled in a late immersion program.

The conservative estimate of a 20% drop out from French immersion because of learning difficulties combined with a similar percentage of children who remain in the program in spite of poor academic performance, even among the select group of children followed in this study, strongly argues for an early identification assessment prior to the children entering an early immersion program. The importance of early identification of these problems is even clearer when the long-term negative feelings and attitudes of these children towards French immersion programs is considered. An additional benefit from an early identification assessment at the four-year-old Kindergarten level would be that children of average and below-average intelligence who have the maturational readiness for an early immersion program would be offered entry into this program more frequently than is now the case. Using more informal criteria such as teacher recommendations, only those children of above-average intelligence and considered by their teachers to be highly mature and motivated are likely to be recommended for the program. These informal criteria are not accurate and some children capable of benefiting from the program are in fact not entering. Therefore, a proper early identification assessment would identify those children who do not have the readiness for early French immersion but at the same time would identify those children at all ability levels who would progress in a French immersion program at a level commensurate with their general abilities.

It must be stressed that although the results of this early identification project are encouraging and indicate that progress in French immersion can be predicted with a high degree of accuracy, this assessment battery should be cross-validated with other groups. It is not known, for example, whether the test scores in this battery will be equally accurate in predicting success in a 50-50 bilingual program, with groups of children of lower general ability levels, or with children from lower socioeconomic backgrounds than those included in this study.

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